

Facilities Management and Capital Renewal

PROGRAM DESCRIPTION

One of the primary roles of the facilities management organizations in both government and private industry is to provide for the long-term needs of the organization's capital assets. This maximizes the life of the facilities, retards their obsolescence and provides for a planned program of repairs, improvements, and restorations to make them suitable for organizational needs. Capital renewal is the planned replacement of building subsystems such as roofs, electrical systems, HVAC systems, and plumbing systems that have reached the end of their useful life. Major capital renewal investments are required in facilities to replace old, obsolete building subsystems that have reached the end of their life cycle. Without significant reinvestment in building subsystems, older facilities will fall into a state of ever decreasing condition and functionality and the maintenance and repair costs necessary to keep the doors open will increase.

LINK TO THE COMPREHENSIVE PLAN

Fairfax County's Comprehensive Plan has established a number of objectives and policies in order to:

- ✓ Provide for a planned series of renovations, improvements, and repairs that will maximize the useful life of County facilities.
- ✓ Modify County facilities and environmental control systems so as to increase energy utilization efficiency.
- ✓ Provide emergency repairs to County facilities in order to correct potential safety or structural hazards.

Source: 2003 Edition of the Fairfax County Comprehensive Plan, as amended

CURRENT PROGRAM INITIATIVES

The Facilities Management Division currently provides support for evaluating facilities, identifying problems and problem areas, developing costs estimates, establishing priorities, and performing the work required. Some of the major work completed annually at County facilities includes the replacement of building subsystems: HVAC and electrical system repairs and replacement, roof repairs and waterproofing, carpet replacement, parking lot resurfacing, fire alarm replacement, and emergency generator replacement.

Fairfax County presently has a facility inventory of 155 buildings (excluding schools, parks, housing and human services residential facilities) with over 7.1 million square feet of space throughout the County. This inventory is expanding both with the addition of newly constructed facilities and by the acquisition of other property. With such a large inventory, and the acquisition of additional facilities, it is critical that a planned program of repairs and restorations be maintained. In addition, the age of a major portion of this inventory of facilities is reaching a point where major reinvestments are required in the building subsystems.

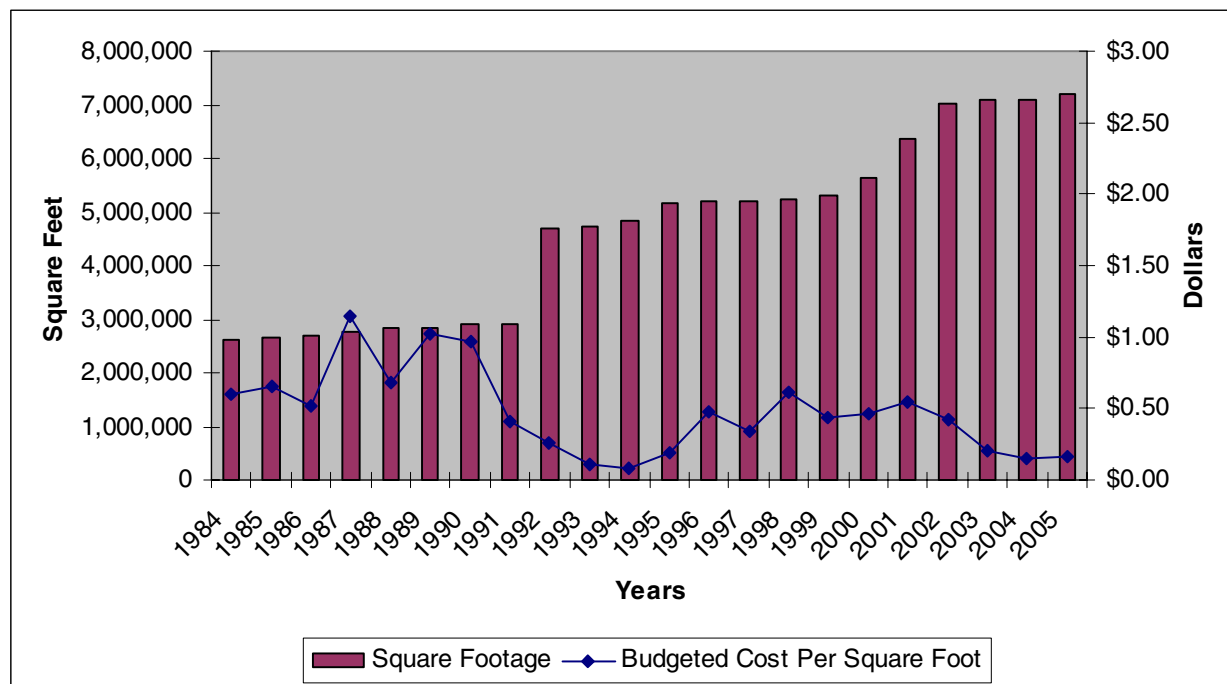
Many County facilities have outdated HVAC and electrical systems which are susceptible to failure or are highly inefficient energy users. Sites are identified and each Individual project involves a two-step process which normally requires two years to complete both design and construction. Roof repairs and waterproofing are conducted in priority order after a detailed evaluation of all roofs at County facilities. Based upon the results of that evaluation, critical requirements are prioritized and a five-year plan is established. Repairs and replacement of facility roofs is considered critical for avoiding the serious structural deterioration which occurs from roof leaks. By addressing this problem in a comprehensive manner, a major backlog of roof problems can be avoided. Carpet replacement and parking lot resurfacing are evaluated annually and prioritized based most critical requirements for high traffic areas. In addition, emergency generators and fire alarm systems are replaced based on equipment age coupled with maintenance and performance history. Minor repairs and renovations, usually generated by customer requests, are accomplished under the category of miscellaneous building and repair. These small projects abate building obsolescence and improve the efficiency and effectiveness of facilities and facility systems.

In order to better define the County's capital renewal needs, a comprehensive facilities condition assessment has been conducted on 92 building sites (approximately 4.2 million square feet of space). The assessment included a complete visual inspection of roofs and all mechanical and electrical components for each facility. Maintenance and repair deficiencies were identified and funding requirements developed. The results indicate over \$60 million will be needed through FY 2008. Another 1.4 million square feet of parking garage facilities have also been assessed and the results indicate another \$3.9 million will be needed through FY 2013. The following table outlines the expected service life of building subsystems used to project capital renewal requirements, coupled with the actual condition of the subsystem component:

**GENERAL GUIDELINES FOR EXPECTED SERVICE LIFE
OF BUILDING SUBSYSTEMS**

ROOFS	20 years
ELECTRICAL	
Lighting	20 years
Generators	25 years
Service/power	25 years
Fire alarms	15 years
CONVEYING SYSTEMS	
Elevator	25 years
Escalator	25 years
HVAC	
Equipment	20 years
Boilers	15 to 30 years
Building Control Systems	10 years
PLUMBING	
Pumps	15 years
Pipes and fittings (supply)	30 years
Fixtures	30 years
FINISHES	
Carpet	7 to 15 years
Systems Furniture	20 to 25 years
SITE	
Paving	15 years

The following graph depicts the increase in the County facility square footage for the last 20 years and the corresponding budgeted capital subsystem renewal funding. Since 1984, the County floor area has increased from 2.6 million square feet to over 7.0 million in 2003. This increase includes significant square footage associated with the construction of the main Government Center building and the acquisition of the Pennino and Herrity buildings in 1992. As County square footage has increased, funding to support capital renewal has not kept pace. The industry standard for capital renewal investment is currently 2 percent of replacement value. Based on current average replacement values of \$150 per square foot, 2 percent would equate to capital renewal requirements of \$3.00 per square foot. Budgeted renewal funds have not reached this level. This may be due to the fact that much of the square footage added in the early 90's was in the form of new facilities and thus has not yet required major capital renewal and subsystem replacement. However, this infrastructure is now aging and appropriate action must be taken to avoid system failures leading to potential disruptions in County services. Funding challenges will be addressed by studying options such as increased pay-as-you-go financing, bond funding, creating a sinking fund (similar to the vehicle replacement program) and other possible mechanisms.



CURRENT PROJECT DESCRIPTIONS

1. **Miscellaneous Building and Repair.** This is a continuing project for the repair, renovation, remodeling and upgrading of various facilities throughout the County. Requirements include abatement of health or safety hazards and emergency or unanticipated repairs of building systems or components.
2. **HVAC/Electrical Systems.** This is a continuing project for the repair, renovation and upgrading of mechanical and electrical systems in various facilities throughout the County.
3. **Roof Repairs and Waterproofing.** This is a continuing project for the repair and replacement of facility roofs and waterproofing systems at County buildings.
4. **Fire Alarm System Replacements.** This is a continuing project for the replacement of fire alarm systems based on age, and difficulty in obtaining replacement parts and service, and condition assessment. This program provides for the replacement of fire alarm systems which are 15 to 30 years old, have exceeded their useful life, and experience frequent failure when tested.

5. **Parking Lot Resurfacing.** This is a continuing project for the repair and maintenance to parking lots and sidewalks at various facilities throughout the County. Parking lot and sidewalk surfaces are removed, the subgrade re-compacted and a new base and surface course installed.
6. **Carpet Replacement.** This is a continuing project for carpet replacement at various County facilities where the existing carpet has deteriorated beyond repair or is in an unserviceable condition.
7. **Emergency Generator Replacement.** This is a continuing project for generator replacements at 70 various sites throughout the County. Requirements are programmed based on equipment age coupled with maintenance and performance history.
8. **Library Facilities Capital Renewal.** This project provides for replacement of HVAC, plumbing, electrical systems, roof replacement and repair, fire alarm replacement, parking lot paving and carpet replacement at various libraries throughout the County.
9. **Human/Juvenile Services Facilities Capital Renewal.** This project provides for replacement of HVAC, plumbing, electrical systems, roof replacement and repair, fire alarm replacement, parking lot paving and carpet replacement at various human service and juvenile facilities throughout the County.
10. **Public Safety Facilities Capital Renewal.** This project provides for replacement of HVAC, plumbing, electrical systems, roof replacement and repair, fire alarm replacement, parking lot paving and carpet replacement at various public safety facilities throughout the County.
11. **Americans with Disabilities Act (ADA) Compliance.** This project provides funding for County compliance with the Americans with Disabilities Act (ADA) of 1990. Title II of the ADA prohibits discrimination on the basis of disability by public entities and requires that each program, service, or activity conducted by a public entity be readily accessible to and usable by individuals with disabilities. This project supports the continued ADA compliance on County owned facilities.
12. **HIPPA Compliance.** \$100,000 to begin to address priority modifications at County facilities. The Health Insurance Portability and Accountability Act (HIPAA), passed by Congress in 1996, requires Countywide compliance with electronic transmission, privacy, disclosure, security and storage regulations with respect to employee and customer health information to protect the privacy of individually identifiable information. Compliance requirements may affect business practices, staffing allocations, facility reconfiguration, awareness training, and technology.
13. **Northern Virginia Community College Contribution.** \$905,670 for Fairfax County's contribution to the continued construction and maintenance of various capital projects on college campuses. Fairfax County participates with eight other jurisdictions to provide funds for required capital improvements in the Northern Virginia Community College system.

PROJECT COST SUMMARIES
FACILITIES MANAGEMENT AND CAPITAL RENEWAL
(\$000's)

Project Title/ Project Number	Source of Funds	Anticipated to be Expended Thru FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Total FY2005-FY2009	Total FY2010-FY2014	Total Project Estimate
1. Miscellaneous Building & Repair / 003099	G, U	C	350	850	700	500	500	2,900	3,700	6,600
2. HVAC/Electrical Systems / 009151	G, U	C	350	4,891	8,866	6,619	525	21,251	16,500	37,751
3. Roof Repairs & Waterproofing / 009132	G, U	C	100	308	723	279	559	1,969	1,900	3,869
4. Fire Alarm System Replacements / 003100	G, U	C	154	142	498	437	97	1,328	1,300	2,628
5. Parking Lot Resurfacing / 009136	G, U	C	100	730	400	400	400	2,030	2,000	4,030
6. Carpet Replacement / 009133	G, U	C	50	525	500	500	500	2,075	5,000	7,075
7. Emergency Generator Replacement / 009431	G, U	C	80	247	93	43	80	543	450	993
8. Library Capital Renewal	B, U	0	1,160	4,000	840			6,000		6,000
9. Juvenile/Human Services Capital Renewal	B, U	0	1,050	3,600	2,350			7,000		7,000
10. Public Safety Capital Renewal	B, U	0			5,000	14,000	7,000	26,000		26,000
11. Countywide Americans With Disabilities Act (ADA) Compliance / 009406	G	C	300	100	100	100	100	700	500	1,200
12. HIPPA Compliance / 009459	G	100						0		100
13. Northern Virginia Community College Capital Contribution / 008043	G	C	906					906		906
TOTAL		100	4,600	15,393	20,070	22,878	9,761	72,702	31,350	104,152

Key: Stage of Development

	Feasibility Study or Design
	Land Acquisition
	Construction

Notes:

Numbers in bold italics represent funded amounts.
A "C" in the Authorized or Expended Column denotes a continuing project.

Key: Source of Funds

B	Bonds
G	General Fund
S	State
F	Federal
X	Other
U	Undetermined